



U.S. ARMY CHEMICAL
MATERIALS AGENCY

MONTHLY UPDATE

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Boyd White, DCD environmental scientist, plants willow branches along a pond's edge. "Give these two to three years to grow and we will see a big difference out here," he says. The TOCDF can be seen off in the distance.

Pond restoration holds great potential

Just off Harrison Road, beyond the chain link fence marked "airport gate" and down the dirt road that once served as the main entry to Deseret Chemical Depot, water softly flows. It's a sound that hasn't been heard in this particular area for more than 15 years, since the beginning of agent operations at the Tooele Chemical Agent Disposal Facility (TOCDF).

But as TOCDF agent operations near completion, water has returned. It flows from Rainbow Reservoir through an irrigation pipeline and into two small ponds that were originally part of the old Johnson Homestead.

"These two ponds were probably right in the front yard of the homestead," says Troy Johnson, DCD environmental program manager. Rusty remnants from the homestead can still be found near the ponds such as old horseshoes, wooden fence posts wrapped with barbed wire and the metal rim of a wooden wagon wheel.

DCD Environmental recently restored the ponds, clearing overgrown weeds, rebuilding the ponds' edges and lining the bottom of each pond with compacted gravel and clay. The ponds were not enlarged—they are very close to the same small size they were more than a hundred years ago—yet they hold great potential for the depot's ecosystem.

(See RESTORATION on page 3)

Annual emergency drill

The final full scale CSEPP exercise

Once again, Deseret Chemical Depot (DCD) along with several local, state and federal agencies proved their emergency response skills in the annual full-scale Chemical Stockpile Emergency Preparedness Program (CSEPP) exercise on Sept. 15. Between a mock chemical incident at DCD and various non-related emergencies throughout Tooele County, emergency personnel were successful in responding to and handling the various incidents.

While DCD workers were responding to a simulated accident that occurred in the depot storage area, resulting in a forklift fire and mustard agent spill, Tooele County was dealing with multiple (See on CSEPP page 2)

No more high-mercury containers

New plans for filtration system

Workers at the Tooele Chemical Agent Disposal Facility (TOCDF) have processed the last mustard agent-filled bulk container with elevated levels of mercury. With this and the completion of the TOCDF 4.2-inch mortar campaign, TOCDF officials have received regulatory approval to allow a portion of the Pollution Abatement System Filtration System (PFS) to be taken off line.

The PFS uses sulfur-impregnated carbon to capture mercury in the exhaust gases from the facility's Metal Parts Furnace (MPF) and two Liquid Incinerators (LICs). The PFS filters are no longer necessary for the remaining mustard bulk containers, which contain little, if any, mercury. The LIC PFS will be taken off line; the MPF PFS will remain operational for future processing of mercury-contaminated secondary wastes.

Since the beginning of mustard agent operations in August 2006, TOCDF workers have made great strides in destroying DCD's mustard agent stockpile—disposing of more than 64,500 pounds of mustard agent to date. TOCDF operations are expected to be complete by mid-year 2011.

Tooele Chemical Agent Disposal Facility Processing

(as of Sept. 19)

Total number of mustard agent-filled bulk containers destroyed	5,323
Total number of mustard agent-filled 155mm projectiles destroyed	54,453
Total number of mustard agent-filled 4.2-inch mortars destroyed	63,274
Percentage of total mustard agent stockpile destroyed	84.56%

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CSEPP

continued from front page

disasters. The chemical incident at DCD kick-started the CSEPP exercise at around 9:00 a.m. and within a two-hour span, Tooele County had responded to a construction accident, hiking accident involving a wildfire, meth lab contamination, natural gas leak and a water main break. Response efforts included activation of various emergency operations centers, the Tooele Community Joint Information Center, and decontamination and treatment facilities.

In addition, the night before, Tooele County also exercised a mass casualty incident where a riot broke out during a community event, involving pepper spray and a chemical bomb that was set-off as a prank. This provided an opportunity for the first responders that are not normally available for the day-time exercise to practice their emergency response efforts.

"Since this is the last year that we will be conducting a federally funded CSEPP full-scale exercise, we felt it was important to involve as many agencies and organizations as possible," said Marilyn Candelaria, Tooele County Emergency Management deputy director, who spent the last year planning and preparing for this exercise. "We really wanted to make sure to test all of our resources," she added.

Approximately 100 people from around the country came



As part of the simulated exercise in DCD's storage area, an emergency responder performs decontamination procedures on a co-worker who's simulating exposure to mustard agent.

to observe and critique the emergency response efforts of the experts and volunteers alike.

"This exercise demonstrated that the Tooele Community, from professional responder to community volunteer, is well prepared," said Cheryl Layman, Emergency Management Specialist with Federal Emergency Management Agency Region 10. "They very effectively demonstrated their capability to protect the public. They showed that they could respond to not only a single incident, but more importantly, their ability to work together and coordinate efforts to handle multiple emergencies at the same time," Layman said.

CAMDS closure moving forward, setting example for other chem demil sites

Just as the Chemical Agent Munitions Disposal System (CAMDS) pioneered the nation's chemical weapons elimination program, it is now leading programmatic closure efforts. CAMDS is the only site under the U.S. Army's Chemical Materials Agency (CMA) that is fully undergoing closure, and it is the first site to do so under the direction of URS.

"The most difficult obstacle has been the coordination of all parties," says CAMDS Site Project Manager Jerry Linn. "You have external and internal groups all working on closure, and everyone has a different vision as to what closure means. It has been difficult to pull all those visions together into one—especially during the actual closure process."

Closure plans for CAMDS include demolishing all of the buildings and facilities at once. But before that can happen, a lot of work has to be done. The Material Treatment Facility is ready for demolition, having undergone a successful Unventilated Monitoring Test (UMT). Several other facilities are near completion, including the Chemical Treatment Facility and the Explosive Containment Cubical. The decommissioning

work on these facilities is nearly complete, and the areas are awaiting concrete sampling and UMTs to ensure they are agent-free and ready for demolition. Decommissioning work is under way in the Brine Drying Area.

Meanwhile, the Decommissioning Work Package (DWP)

for CAMDS' most heavily contaminated areas, the Multipurpose Demilitarization Facility (MDF) and the Bulk Item Facility (BIF), is being developed.

"The MDF was the facility where the demil equipment was tested, including the punch and drain machine and the projectile-mortar disassembly machine, and it included tanks to collect the agent from ton containers and projectiles," says Woody Burhoe, the SAIC Project Lead for CAMDS. The ton containers were handled for sampling in the BIF and the ACWA neutralization project was also completed in there.

The DWP includes the historical use of these areas and proposes how they

will be properly decontaminated and decommissioned; the plan is expected to be submitted to the state for approval by early November.

CAMDS personnel will participate in the upcoming 8+1 Summit in Portland, Ore., Sept. 29-30. The summit serves as a stage for all chem demil sites to come together and discuss closure—particularly CAMDS' experiences and how those challenges apply programmatically. "Sharing information is key to a successful programmatic-wide closure process," says Linn, "starting with JACADS and continuing with Aberdeen and Newport... now it's CAMDS' turn to be in the spotlight and share all the information it can to help other sites when it is time for them to start closure-related activities."

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Explosive chamber ready for shipment

Following final testing requirements to validate the Detonation of Ammunition in Vacuum Integrated Chamber (DAVINCH), the equipment will now be prepared for delivery to Deseret Chemical Depot (DCD).

The DAVINCH system will be used to destroy more than 300 remaining mustard-agent filled munitions. These munitions include those that have previously leaked and now are safely stored in overpack containers and "reject" munitions—those munitions that are badly deteriorated, making it difficult to remove the munition components.

While the contract to destroy the munitions is with Versar, the chamber was fabricated by Kobe Steel, owners and operators of the DAVINCH system. The chamber has undergone a number of tests at the vendor location in Kanda, Japan, including initial testing early this year, which demonstrated that the DAVINCH is capable of destroying double overpacked munitions.

Last week, additional testing was conducted to determine the net explosive capacity of the equipment. The Department of Defense Explosives Safety Board (DDESB) requires this testing in order to set the explosive limit and certify the system for use before it is delivered to United States.

Although the system is designed for at least 60 kilograms of net explosive material, or 133 lbs of TNT equivalent explosives, the DDESB requires the system to be tested with 75 kilograms, or 125 percent of the rated load. Additional testing was also conducted using different explosive weights in order to see how the chamber reacts to various scenarios.

"The chamber performed well and successfully achieved DDESB certification requirements," TOCDF Site Project Manager Ted Ryba said following his trip to Japan to observe the demonstration tests. "Not only did the system performance meet requirements, it surpassed all expectations."

Permitting activities continue as TOCDF officials wrap up the first public comment period. Once comments are addressed, the permit request will be submitted for a second comment period and a public hearing will be held.

The DAVINCH will be located in DCD's Area 10. Site preparation work is well underway and the system is scheduled to arrive in November. Following installation, crews will begin an extensive systemization period, ensuring that the equipment is working properly. Furthermore, an operational readiness review will be conducted prior to beginning operations next summer.



At the test site in Kanda, Japan, Kobe Steel technicians prepare to demonstrate the explosive capacity of the DAVINCH for U.S. Army and Department of Defense (DoD) representatives, including CMA and TOCDF officials. The tests are required by the U.S. DoD Explosives Safety Board.

Restoration

continued from front page

"Over time," says Johnson, "these ponds will offer a prime habitat for the wildlife out here—a place to get a drink or bed down." As proof, numerous deer tracks have already been spotted around the ponds and several species of birds frequently visit.

While the ponds will provide excellent habitat, their restoration is not the main objective. Revitalizing nearby land for cattle grazing is the main goal. Overflow from the ponds trickles its way through newly installed pipelines and onto 250 acres of adjacent land. The water will replenish the existing vegetation, as well as help the great basin wild rye that will be planted this fall grow next spring.

"This land was used for cattle grazing before 1995," says Johnson, "and we hope to use it again for that purpose."

Johnson says Tooele Army Depot (TEAD), which will take over approximately 13,000 acres of DCD land, including this grazing area, at the end of stockpile elimination, supports the proposal. Johnson says TEAD currently leases some of its property for cattle grazing and has had considerable success doing so.

Johnson estimates the revitalization of the ponds and the land cost less than \$500, yet its worth—both environmental and monetary—is invaluable.

"This is an example of how we can make a big ecological impact for very little money," he says.

Upcoming Events

- **Oct. 14, 1:30 p.m.** - Utah Division of Solid and Hazardous Waste Control Board monthly meeting. The meeting will be held in Room 1015 at the Department of Environmental Quality building, 195 N. 1950 W. in Salt Lake City.

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